

Stabler (R. H.)

ADDRESS

BY

PROF. E. T. FRISTOE, LL.D.,

AND INTRODUCTORY

BY

PROF. R. H. STABLER, M. D.,

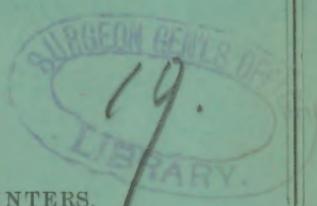
DELIVERED BEFORE THE

NATIONAL COLLEGE OF PHARMACY,

OCTOBER 1, 1874.

WASHINGTON, D. C.:
JUDD & DETWEILER, PRINTERS.

1875.



ADDRESS

DELIVERED BY

PROF. E. T. FRISTOE, LL.D.,

BEFORE THE

NATIONAL COLLEGE OF PHARMACY,

OCTOBER 1, 1874.

Surgeon Gen'l's Office
LIBRARY
464880
WASHINGTON, D. C.:
PRINTED BY JUDD & DETWEILER,
1875.

ADDRESS.

*Mr. President and Gentlemen
of the National College of Pharmacy:*

The attention which this College has attracted abroad, and the influence it has already exerted at home, will fully justify your remark in the announcement for the third session, "that the most sanguine expectations of its founders have been fully realized," and also show the wisdom of establishing such an institution in this city.

Educational institutions may be divided into three classes:

First, those for general education, giving simply that amount of training necessary to enable a man to conduct the ordinary affairs of life. Here the education is largely mechanical, but as every one needs this much, schools for this purpose will always be well patronized, and consequently self-sustaining; and no sacrifice on the part of friends is necessary to make them succeed. To this class belong all primary private schools, and the public schools of the country.

The second class aims not only to give a young man that knowledge which will enable him to perform the duties of a good citizen, but also to develop and expand his intellectual powers, to give him broad and enlarged views of life and its duties, to enable him not only to comprehend questions of local and temporary interest, but to grapple successfully with great problems affecting the welfare of his country in the remote future, and in fact to make him a leader and guide in the great changes through which society must pass, both in a moral and political point of view.

These institutions give what is termed a liberal education, and include the ordinary colleges for academic instruction.

But as a far smaller number of students, either from want

of inclination, from want of means, or for other reasons, attend these institutions; and as the expense of conducting them is far greater than in the other class, they can never be carried on without large endowments, annual contributions, or state aid. Not a single institution of this class, in this country, is self-supporting. Harvard, Yale, Princeton, with their large numbers of students, need and get large incomes from endowments to meet their current expenses.

The University of Virginia, that of Michigan, that of Missouri, and those of other States receive large yearly appropriations to defray their expenses, although all these have large numbers of students.

When we turn to Europe we find the same state of things, for I am told that the University of Berlin, with two thousand students, expends annually nearly one hundred and fifty thousand dollars in addition to fees from students.

The third class embraces all those schools where either a professional or technological education is acquired, and includes medical and law schools, school of sciences, schools of art, schools of technology, and pharmaceutical schools.

The expense of conducting these is always much larger than in either of the preceding classes, owing to the necessity of a large outlay for apparatus, and the employment of skilled and expert teachers, whilst the patronage is always limited, on account of the small number of young men who are willing to undergo the vast amount of work necessary to thoroughly prepare themselves for their several professions. Besides, the young men, who have courage and resolution to undertake such a course, are not those who have abundant means to defray the expenses incurred for their benefit.

Many of these institutions could not be carried on at all, were it not that gentlemen can be found in the various branches of learning, in our large cities, depending upon other sources for a support, who will do this work for a moderate compensation.

Strange to say, this class of schools has been the last to attract the attention of men who have means to endow them. No medical school in the country has any endowment, and no college of pharmacy has any, and the oldest of these two divisions are not yet self-sustaining. A better feeling, however, is beginning to manifest itself in respect to this class, for during the last few years many schools of technology have received ample endowments.

Now, if the common schools need assistance, and the colleges, with their comparatively large numbers of students, need State aid and endowments, much more will all the schools of this class need aid from those interested in their success. And further, no schools of any class ever received aid, until they had demonstrated *their necessity*, and that there was a strong probability of success.

In the absence of any one who can come forward and endow this college, you have made a wise arrangement for its support, by which the many interested in the advancement of your profession, shall share the expense.

You must not suppose, however, that this school will be any exception to the general rule, and soon pay its way. It will probably be many years before its patronage will be such that no aid will be required from its friends. I speak now in a pecuniary point of view; it may pay in other respects.

But as we are accustomed to measure everything in this country by dollars and cents, the only unit the American people seem to understand, some of you may say, if it don't pay what is the use of it? What good can it do? Why subject ourselves to an annual expense that brings no return; and what necessity is there for it?

This is the main point, gentlemen, to which I wish to call your attention.

This college is a necessity for many reasons. I will name but three.

First. You need *it* or some similar organization as a point

or centre around which you may concentrate your combined energies for the improvement of your profession. "In union there is strength," but if each should waste his powers in a different direction very little would be accomplished for the general good. Each brings here the knowledge he has gained, and the discoveries he has made, and communicates them to his associates, and they become common stock; and thus, in the course of time, the accumulated knowledge of all is far superior to that which any one could have acquired. Questions of interest and policy are discussed and decided, and a uniformity of action is secured. Power to reach the public mind is obtained, and the standard of your profession gradually elevated to its proper level.

Physicians have their societies for mutual protection; mechanics and laborers of all kinds have their organizations for the same purpose; and it is far more important, both for your welfare and that of the community, that you should have an organization like this, which will draw a line of distinction between the capable and the incapable.

Without the scientific knowledge taught here, both in your meetings and in the class-room, your profession becomes mere empiricism, and you can have no social position, nor exert any influence for good, in the community. Every ignorant man you admit into your body has an injurious influence upon its reputation. His demerits lower you, wherever he is known, and the want of respect for him begets distrust and disrespect for the profession in general.

In the second place, gentlemen, you need the influence of this college to educate the public, the community around you. Some may ask, what have we to do with educating the public free of charge? Much! I would answer, if you wish to help yourselves and advance your interest.

About no profession, probably, has the public such crude ideas as about yours. The most, if not all of you, are aware that to the public one specimen of opium is as good as another; that one preparation of laudanum is as good as

another. In other words, that *opium* is opium, and *laudanum* is *laudanum*, the world over. They know one piece of beef is better than another, and how to choose the better piece; that one brand of flour is better than another, and they select the best; that one piece of cloth is better than another, and that it is economy to buy the better piece; in other words, they understand well all matters pertaining to food and raiment, but they know little, and seem to care less, about differences in the chemicals and drugs they take to restore or preserve their health.

There seems to be a strange idea in the minds of the public in regard to drug stores. People seem to think that when a gentleman rents a room, fills his shelves with bottles, and writes over his door *John Smith, Druggist, Chemist, and Pharmaceutist*, that he thereby in some mysterious way, acquires the power and knowledge of dispensing medicines, and the uneducated will flock to him, provided he apparently sells his goods *cheap*.

A man will pay a large fee for a lawyer to save his pocket; when sick he will send for the best physician to tell him what the matter is and write him a prescription; but strangely he forgets that this prescription must be compounded in the mortar of a druggist, and if not done properly, his fee to the physician is lost, and his prescription worse than useless, and hence he sends to the nearest druggist, without regard to his qualifications, or the character of his medicines, provided he sells them *cheap*.

Doctors are said to bury their mistakes under ground, but no doubt many incompetent druggists do a large share in digging the graves. Don't you think the public will thank you for information on this point, so that the doctors may be saved from this necessity, and the people from such a misfortune?

In consequence of this excessive ignorance on the part of the public, a young man of little knowledge, much vanity, and great pretensions, who has swept the floor of some good

druggist for six months, and learned the names of a few labels on the bottles, because the laws are too stringent in his city, or probably because he has become tired of his apprenticeship, will say to his indulgent aunt, uncle, father, mother, or some kinsman, let me have a few hundred dollars and I will go to Washington and open a drug store. He comes, rents a room by your side, fills it with bottles, puts his colors, of the brightest hues, in his windows, and writes over his door *Pure Drugs and Chemicals, Physicians' Prescriptions a Specialty*, when probably he could not compound a difficult prescription properly, if his life depended upon it. As for pure drugs, he does not think of purchasing them when cheaper ones will answer his purpose, and he has never learned the difference between a common and pure chemical, or a chemical and a drug. He is nothing but an imposter, an ignoramus in the profession, and if you should enter his store for the purpose of testing his knowledge, and ask for ten drops of the oxide of hydrogen, he would answer very knowingly, and say, I am just out, but will have some in the evening; and as soon as his customer should leave would hasten to some first-class store, and ask for half an ounce of this to him rare and expensive chemical or drug, and no doubt would be very much surprised if some intelligent clerk should go to the pump, draw a bucketfull, and present it to him.

Don't you think it is to your interest to educate the public, until they pass laws to stop the influx to this city of such men, who are capable of doing nothing but imposing upon the community, degrading your profession, and selling patent medicines and bad whiskey?

Thirdly, gentlemen, you need such an institution as this that you may do your duty to the generation who are to succeed you, to the young men who are to take your places of responsibility when you are gone. May this feature of the college induce the active young men of this city to take a deeper interest in the success of this institution.

Most young men who enter the drug business are of limited means. It requires a long apprenticeship and laborious application, and hence only those who have strong purpose and a determination to labor and succeed, and who are willing to undergo many privations for this success, ever enter your profession. It offers no premium for idlers and loafers, and no royal road for those who would purchase preferment. Upon such a career, as a general rule, only the best young men will enter.

It is necessary also to enter the profession so early that time is wanting to complete a liberal and systematic education. Hence in most cases the mind is not developed, the talents of the young men are, as it were, hidden, and therefore just such a course, as you have here prescribed, is necessary for teaching them the method of systematic study, of looking at one thing in its relations to others, of teaching them to use their powers of observation, their thinking and reasoning faculties, so that advantage may be taken of every fact that comes under their notice.

In acquiring a liberal education we study various branches to cultivate the different powers of the mind; for example, we study geometry to strengthen the reasoning faculties; but no study will educate those faculties the druggist needs so much, to enable him to be systematic, as the study of the various branches of natural science, and no studies will be so valuable to him, both in respect to the knowledge they furnish and in guarding him against imposition. And no one can doubt the necessity of such studies as a means of education alone, when men and women, ignorant of science, will proclaim their belief in the supernatural powers of dead matter; when people, even educated, will throng the necromancer's room to hear disembodied spirits rap upon a table, and daily become the dupes of the most barefaced quackeries. When we see intelligent people startled and frightened with every scientific announcement calculated to overthrow some cherished notion in morals or religion,

and who gape at, and swallow down everything, even though to them incomprehensible, if presented under the guise of science.

It is often said "truth is stranger than fiction," and this is especially so when the facts of science and the pretensions of quackery are contrasted. For example, tell an uninstructed man you can sit in your room and talk with a friend in London, by using a few pieces of zinc and copper, a little acid, and a long wire; tell him you can extract rays from the sunlight, which he cannot see, and make them visible with a solution of sulphate quinine; tell him that by intercepting a few rays of light you can make them reveal to you the chemical composition of the sun and stars, and then tell him that by resting your hands on a table you can make it rise up, walk about, and whirl around the room. All these seem strange, but to most persons the truths are stranger than the fiction, and for want of scientific knowledge they cannot distinguish the true coin from the counterfeit, or gainsay the pretensions of imposture.

A sprightly young man, in his four years' apprenticeship, can accumulate a large amount of knowledge in the way of facts and processes; but without a systematic training they will be packed away without any arrangement, and become of little value, very much like the words of a dictionary arranged without regard to alphabetical order.

The reasons of the various processes being unknown, he will be unable to make any improvements, or to avoid failure under a change of circumstances. Again, competition is so great that nothing but a scientific knowledge of his business will insure success. The profits are so small that he cannot afford to waste his time and material in useless experiments. His knowledge of the business must be such that it will enable him to take advantage of every new process, if a good one, and to decide beforehand the probability of success or failure.

Many of you, gentlemen, have been giving all your time

and study to your profession for ten or twenty years, and yet find now all your efforts necessary to insure success. But your science is constantly advancing, and the knowledge, necessary to succeed twenty years ago, will no longer suffice. The young man must start on a higher level, and that level is constantly rising.

What I have said has reference principally to pecuniary prosperity, but there is still a higher aim in life, to which every intelligent being should aspire. A man may make money and accumulate wealth, and still be nothing but a machine, not having the capacity to use it, or even enjoy it properly. Another may barely make a support and yet feel that he is using his time and talents to the best advantage, and have the happy assurance when old age comes, that he has served his profession properly, and benefited his fellow-men.

Let me illustrate this by describing the careers of two young men. Take one with merely the rudiments of an education, such as reading, writing, &c. Let him learn by rote the mechanical parts of his business, without the philosophical principles underlying his art; he will disdain science in all its phases; he will tell you that philosophy is the art of telling fortunes; that experimental chemistry is nothing but magic. He sees no beauty in the chemical reactions and processes that daily take place in your laboratories, and probably is not aware that such things are going on. Of the advancement in the various branches of natural history; of the discoveries in physical science; and of the many improvements in every art connected with his own, he is as ignorant as the Esquiman or Hottentot. He has no idea of the manner in which the dormant powers within him may be improved and expanded, has no relish for intellectual pursuits, and no conception of the pleasures they afford. He makes no effort to collect and preserve the records of the various societies connected with his profession, and sets no value upon any of these things, except so

far as they tend to increase his wealth, or administer to the gratification of his appetites.

He has no idea of making improvements in his art, and gives no countenance to those made by others. He sets his face against all innovations, good or bad, and determines to abide by the good old customs of his predecessors, however absurd. Were it dependent upon him, the secrets of his art would ever remain a mystery, and all useful innovations cease.

He can never have his mind elevated above the daily routine of his work, and enjoy those objects that delight the man of science, and in his hours of leisure his thoughts run wild among the most grovelling objects, or sink him into beastly sensuality.

On the other hand, the young man whose mind has been illumined by science, has views, feelings and exquisite enjoyments to which the other is an entire stranger. In consequence of the multifarious ideas he has received in a systematic manner, and the methods of study he has acquired, he can go back and view with profit and pleasure the various stages of progress in his own profession, and the relations it bears to others. He takes delight in viewing with his mental eye the wonderful forces brought into play during a chemical change, and can predict with certainty results which to the other would seem marvelous, when he understands the chemical affinities of the atoms. In his rural walks he can not only see, that nature is beautiful, but can penetrate into those hidden processes which are constantly going on in the wonderful laboratories of the roots, stems, leaves and flowers of plants, and contemplate the various orders, genera, species and other harmonies of the vegetable world.

In the atmosphere we breathe, where one perceives nothing but an immense blank, he beholds an assemblage of striking wonders. He views it as a compound material body producing the most diversified and beneficent results,

He sees in it the agent producing germination and growth, the supporter of flame, the sustainer of the clouds, the vehicle of smell, and the medium of sound, and other countless advantages. In the strata of the mountain, where one perceives nothing, he sees beauty and order, and the history of revolutions written millions of years past. Yea, from the crystal that sparkles in the cave to the mountain that towers to the clouds; from the humble violet that droops by the rivulet to the tall cedar of Lebanon; he learns the wondrous truth that

“The hand that made us is divine,”

and thus enters into a new world where there are beauties, harmonies and exquisite contrivances altogether inconceivable to the unreflecting mind.

As a matter, then, of mere happiness, I would have young men study natural science, and cultivate quickness and truthfulness of observation, to see everything, and see it accurately; to hear everything, and hear it exactly.

But this habit would not only be a source of happiness, but also a means of usefulness. The errors of the world come less from bad reasoning than from inaccurate observation and careless hearing. It has been said by a distinguished writer that a witness who can state just what he saw, and who saw all that was to be seen, who can repeat just what he heard, and who heard all that was to be heard, is much rarer than a sound lawyer or learned judge. Most men see more with their imagination than with their eyes, and can never separate *their* fancies from the facts.

A physician can seldom get from a patient a statement of his symptoms, without a theory of the cause; a lawyer can never get a statement from his client uncolored by imputations in regard to his opponent; and scientific men are aware that the popular testimony of a natural phenomenon is wholly worthless. In short, a study of natural science will ever tend to make young men use their five senses with fidelity, and report what they perceive with accuracy.

It is true, the study of the first principles of science is often attended with difficulty, and to some minds may wear a dry and uninteresting aspect; but as the mind proceeds onward and acquires clear conceptions of what was once obscure, every difficulty it is enabled to overcome gives it a new relish for the subject under investigation, and additional vigor to vanquish the difficulties still remaining, till at length it feels a pleasure and interest which no difficulty, nor even the lapse of time can efface, and thus, after a few difficulties are overcome, a young man retains what he has gained, and although he may have learned but one thing thoroughly, he has gained a power which will enable him to learn to the end of his life, to master whatever subject he may undertake, and apply with profit whatever he has gained, without danger of being imposed upon by imitations, and also without danger of having his knowledge evaporate from the mind, as it always will do when gotten imperfectly or in small quantities.

With regard to your special profession, gentlemen, it is universally admitted that an extensive knowledge of chemistry, pharmacy, *materia medica*, and botany, is very essential. Besides the laboratories of the vegetable and mineral kingdoms, from which you draw your materials to be compounded in your private laboratories, the human body may be considered as a most wonderful laboratory, where the various processes of fermentation, absorption, decomposition, combustion, solution, precipitation, are continually going on. Every article of food and drink we throw into the stomach, every portion of the atmosphere we breathe, every motion of a muscle, every contraction of the heart, every pulse that vibrates, and even every thought of the intellect, produces a chemical change in the animal system, the nature of which is of great importance to *all* whose duty it is, in any manner, to administer to its wants.

How can you prepare, properly, antidotes for diseases if you are ignorant of the sources whence to draw them, and

ignorant of their properties and effects? How can you render that assistance to the physician which he expects, and which the people demand, without that thorough knowledge which will enable you to form a judgment in cases of emergency?

But, gentlemen, scientific knowledge will not only render a man more skillful, and give him pleasure in pursuing his profession, but will enable him to make improvements in his art, and the science connected with it. It is sometimes objected by the ignorant, that science is uncertain and changeable, and they point with pride to the many exploded theories superceded by others, as a proof that the present knowledge is uncertain, not aware that this is the highest praise they could bestow, for science moves continually towards the fountain of truth, caring little for cherished opinions, but taking the highest delight when freed from error, at having advanced one step further towards ultimate certainty, whilst prejudice keeps stubbornly to its position, whether disproved or not.

We also often hear *science* and practical common sense contrasted as antagonistic. This certainly is a strange error, for true science is always practical, and must be so; inasmuch as she knows what she is doing, while practice alone is condemned to work forever in the dark. No one can doubt the value of practice, especially in your profession; but no one should say that practical common sense would not be doubly powerful if supplied with the means science can give.

It is frequently affirmed that many useful inventions have been made by chance, and by persons ignorant of science, who have stumbled upon them.

These have been much fewer than is supposed; and in every instance, where chance has suggested the first hint, the future improvements have been directed by scientific knowledge. The son of a spectacle maker discovered by chance the effect produced by two lenses when placed near each

other, but it required all the knowledge Galileo possessed to build upon that hint and construct a telescope.

Millions of men had seen bodies fall to the earth, a Newton only could follow these daily hints and draw therefrom the grand conception—universal gravitation.

Thousands of persons knew there was power in the steam of water that would force corks out of stoppered bottles, but such a hint could develop into a steam-engine only in the hands of such a man as Watts. For many years it was known that electricity would follow some bodies better than others, but the world waited for Franklin to invent the lightning-rod. For more than half a century it was known that electricity would travel from one point to another at a distance along an insulated wire, but the genius and learning of Henry, and the mechanical ingenuity of Morse were necessary to construct the electric telegraph.

For many years it was known that there was an active principle in Peruvian bark, very beneficial in cases of intermittent fever, and yet that nauseous and bitter bark, from which a patient would shrink with horror, was swallowed daily until organic chemistry became a science and Pelletier extracted the most useful alkaloid known to the *Materia Medica*. So, gentlemen, with all great improvements, chance may suggest hints, but science must perfect them.

If the druggist, like the mechanic, is unacquainted with the scientific principles of his profession, he trudges along, like a mill-horse, in the same beaten track, losing a thousand opportunities which might suggest new improvements.

Not only does the practical *scientific* man have advantages superior to the ignorant one, but his chances are even greater in many respects than those of a philosopher who never engages in practical operations, for the former can see in his daily experience, what is useless or defective in apparatus or machinery, and hence is “always in the way of good luck,” ready to take advantage of it when it comes; and should chance suggest to him some new improvement, he will not

only enjoy the honor of *making* and perfecting it, but also reap the pecuniary advantages resulting therefrom.

I might continue, *ad infinitum*, to enumerate the advantages of the cultivated man, but enough has been said. Choose now, young gentlemen, before it is too late, and before the cares and duties of life accumulate around you, which course you will take.

You *may possibly* make money in either, and in either you may fail to do so. If you fail in one, you have no resource left but the bitter recollection of a misspent life; and if you succeed, you will have no capacity to enjoy or use properly the profits of your labor. In the other, if you fail, you can turn to those treasures you have laid up in the mind, of which no misfortune can deprive you, and use them in other pursuits; and, if you succeed, you will pass a green old age in the rational enjoyment of the blessings God has given you.

As for me, if I had to choose between the two, though I should live no longer than the butterfly that floats in the sunbeam of a summer's morn, I would rather during that short period soar aloft, and leave the record of my flight among the masters who have occupied the *upper stories of my profession*, than live a long life even with wealth, and at last die, as the brute dies, burying the memory of my life, together with my body, in eternal forgetfulness.

INTRODUCTORY.

Mr. President and Gentlemen:

In commencing this, the third course of lectures in the National College of Pharmacy, it will be appropriate to advert to the objects of our labors. As stated in the declaration, they are to cultivate, improve, and diffuse a knowledge of the science and art of pharmacy, and with that view the collateral sciences—*chemistry, materia medica, botany* and *analytical chemistry*. This enterprise is no new thing, just sprung into existence, as will be made manifest by consulting the American Journal of Pharmacy for the year 1856, where is an editorial notice that the preliminary steps towards an organization of the pharmacists of Washington and Georgetown have been taken, and that it is proposed to apply to Congress for a charter, with collegiate powers, should the organization be effected.

In a subsequent number of this journal for the same year is a further notice from its lamented editor, (Mr. Procter,) as follows:

“The work of pharmaceutical organization among the larger communities of the United States is slowly but surely progressing. Among the recent movements none has been more successful than that at Washington.”

The principal aim of the association at that time had reference to the increase of professional competency of the members; the ultimate design was stated to include within the scope of the association a school of pharmacy.

At the present time we may congratulate you on the successful accomplishment of these worthy objects.

The period is not very remote when the apothecary was almost at the lowest extremity of that scale which measures the relative respectability of occupations above mere manual

labor. Engaged in preparing or compounding medicines according to certain fixed formulas, with little or no knowledge of the principles concerned in his operations, he could boast of superiority over the pastry-cook or confectioner in no other respect than in the greater variety and importance of the materials of his art; and, while the nature of certain offices about the sick to which he was occasionally subjected exposed him to the sneers of the vulgar, the assumption of a character for research into the mysteries of nature, supported by the exhibition of reptiles and various monsters upon his shelves, made him the subject of ridicule with those who were aware of the real weakness of his pretensions. The apothecary, therefore, became the jest of the novelist and comedian; and so little was the humility of his occupation compensated by pecuniary advantages that he was chosen by the wits of the times as the very personification of poverty and leanness.

The history of the progress of society is that of the division of labor, and there is no surer indication of advancement in the arts of civilization than the multiplicity and subdivisions of occupations. In the first stages of the colonies of America the storekeeper was a dealer in all kinds of merchandise. He imported whatever he could sell, *dry goods, groceries, iron-mongery, books, paints, and medicines.*

Gradually the demand for each of these increased, and men devoted their capital and labor to vending merchandise of one species. The business of the apothecary was long a subordinate branch of the establishment of a physician, or carried on by the man who was at the same time a druggist and dealer in paints. Latterly, however, it has been nearly abandoned both by the medical profession and the wholesale druggist. The *drug-factor, the druggist, the manufacturing chemist, the drug powderer, the paint and oil dealer, the varnish maker and the pharmacist*, now multiply the business which formerly centred in a single tradesman. In pro-

portion as the apothecary devoted himself to the cultivation of his appropriate art, he found it to become important and complicated. Its intimate connection with modern chemistry has elevated it to the rank of a science; a complete mastery of all its details implies the knowledge of the *manufacturer*, the *merchant*, the *physician*, and the *naturalist*, and it requires to be pursued, not merely with the frugality and industry of a tradesman, but with the patient sagacity of an investigator of nature.

The genius of some of the most eminent chemists of the last and present age, received its first impulse and direction in the laboratory of the apothecary. Similar results will, no doubt, follow from the same causes in America. We have here, as there, a learned and discerning body of patrons and judges in the medical profession. Men versed in all the requisite sciences will here, as there, engage in the business. A more liberal education, the competition of business, the rapid diffusion of information, will combine to raise the pharmacist to the respectable rank which he occupies in Europe.

Dr. Wood, in some of his earlier addresses before the pharmacists of Philadelphia, describes the state of pharmacy in this country as at first almost universally, as it still is in many places, united with medicine. To do justice to the two occupations of the physician and apothecary was utterly impossible for any man of ordinary endowments. That was, therefore, neglected which was deemed of least importance, and the practitioner was too much in the habit of leaving the preparation and dispensing of medicines to his students, who necessarily knew little upon the subject, though it is true not much less than himself. How was it possible for pharmacy to flourish or attain respect under these circumstances? Overshadowed as it was by the sister profession with which it had been planted, its growth was mean and stunted, though still sufficient to abstract a portion of the nourishment, and thus restrain also the growth

of its companion. No wonder that it was looked upon in a degrading light! No wonder that men of education and a generous spirit were unwilling to place themselves behind the counter to dispense potions and powders when no other qualifications were requisite for the task than such as are requisite for the selling of tape and bobbin. Even medicine was less esteemed in such an association, and young men of elevated views and respectable station in society were not then as now seen crowding the ranks of that profession. That in some parts of the world the business of the apothecary may not have been disreputable, and that in all parts individuals occasionally by their talents or conduct raised themselves above the mass of their associates into notice and esteem is no proof that the general grade of the profession was not as low as I have described it, any more than the occasional incompetence of individuals now attached to the profession, and its comparative discredit in certain countries can be received as evidence of its want of respectability at the present day.

It must be admitted then by every one who has the least pretension to accurate information on the subject, that the present state of the profession is in many respects the *reverse* of its former state, that almost everywhere pharmacy is now respectable, and that in some places it has been elevated to a position calculated to reflect positive credit upon those engaged in it.

American pharmacy owes a heavy debt of gratitude for its present advanced state to the authors of the U. S. Dispensatory, issued first in the year 1833, by Drs. George B. Wood and Franklin Bache, of Philadelphia. This work is still one of the best and safest guides to the pharmacist, being a full and learned treatise on vegetable *materia medica* and botany, compiled from the best authors, by Dr. Wood; and on mineral *materia medica* and chemistry by Dr. Bache. This work is based on the United States *Pharmacopœia*, and

is characterized by the extensive learning and scrupulous accuracy of its authors. The former of these learned gentlemen still lives to adorn his profession; the other (Dr. Bache,) a direct descendant of the eminent statesman and philosopher of our Revolutionary era, Dr. Benjamin Franklin, died full of years and honor in March, 1864.

The United States are rich in medicinal products, inferior probably to those of no other section of the globe. If we include the southern portion of the American continent many more valuable and efficient remedies are found to enrich our *materia medica*. Not to mention numerous substances of little importance, we have in the *Peruvian bark* the most valuable of all tonic medicines, scarcely, indeed, surpassed in efficiency and extent of application by any other article; in the *quassia* of *Surinam* and the West Indies, the strongest of the pure vegetable bitters; in the *rhatany* of *Peru*, one of the most efficient astringents; in the *ipecacuanha* of Brazil, the best of all vegetable emetics; in the *jalap* of Mexico, the best hydrogogue cathartic; in the *balsam* of *Tolu*, a good stimulant expectorant, and in *copaiba* and *guaiac*, and *sarsaparilla*, medicines of peculiar and valuable properties, such as could not well be dispensed with, and could not be replaced elsewhere. But none of these substances are found in the United States. Yet that they are also rich in medicinal products will be rendered obvious by running the eye over a list of the more important indigenous medicines. Under the head of astringents, we shall find the bark of the different species of *oak*, the roots of the *blackberry*, *dewberry*, *geraniums maculatum*, and *Heuchera Americana*, or *alum root*, and the leaves of the *pipsisseua* and *uva urse*.

In tonics our country is very rich. It is true we have no *cinchona*; but, in the barks of the different species of *cornus* or *dog wood* we have remedies analagous, though inferior to it in virtues. Of the simple bitters *sapindia* or *century*, *copitis*

or *gold thread* and *xanthoriza* or *yellow root* might be substituted by the medical practitioner for gentian, quassia and columbo. The union of various important properties with the purely tonic as those of a stimulant in *serpentaria* of a narcotic in *hops*, of a sedative in *wild cherry bark*, of a dia-phoretic and emetic in *boneset*, renders these medicines of great value. Our catalogue of aromatics is also copious, including, among others, *angelica*, *calamus*, *sassafras*, *hedeoma* or *pennyroyal*, *common marjoram*, *gaultheria* or *partridge berry* and *spice wood*. Of stimulants we have *turpentine* and its *volatile oil*, and a host of others of various properties, *lobelia*, *stramonium*, *podophyllum*, *walnut bark*, *may-apple root*, &c. As epispastics we have many species of *cantharis* not inferior in virtues to the Spanish fly.

This enumeration does not near exhaust the catalogue of native medicines, but serves to show that our resources are ample. Many others have been more or less investigated, and there remains no doubt some yet buried in the mass of our luxuriant vegetation to reward and honor their discoverers.

The opinion was advanced more than eighty years ago by Shœpf that, relying upon their native resources, the Americans might dispense with the greater part, if not the whole, of the imported medicines. This exclusive reliance on native remedies would at least be attended with great inconvenience. The present standard remedies are for the most part those which have stood the test of ages. They have been gathered from all quarters of the globe, have gone through every variety of trial, and have been sifted out from an immense mass of materials which have been for thousands of years in the course of accumulation. Although our medicinal riches are very ample, it is not in the order of Providence to lavish on any one country a wealth equal to that scattered over the whole world beside. Should political accident, however, ever cut off our supply of drugs

from abroad, though the want of them would certainly be severely felt, we should nevertheless be able, in the products of our own soil, to find partial substitutes for almost all of them. It becomes us most carefully to cultivate our resources, both that we may be fully prepared against whatever adverse events may occur, and in the hope, moreover, that we may thereby add something new and valuable to the means already existing for the alleviation of human evil.

